

## **REMARKS/ARGUMENTS**

### **I. Status of Claims**

Prior to this Amendment, claims 1 - 20 were pending with claims 1, 6, 11 and 16 being independent. Applicants note with thanks claims 2-5, 7-10, 12-15 and 17-20 were indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **II. Rejections under 35 U.S.C. §103 (a)**

Claims 1, 6, 11 and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,269,075 to Tran in view of U.S. Patent No. 6,580,750 to Aue. Applicants respectfully traverse the rejection.

Claim 1 recites an apparatus for making different fingers track multi-path signals allocated to the respective fingers in a rake receiving apparatus in which the respective fingers are allocated with the multi-path signals received through different paths and demodulate the multi-path signals allocated to the respective fingers. The apparatus comprises:

the fingers, each receiving timing control signals generated from other fingers in order to track the allocated multi-path signals and tracking the multi-path signal allocated to the corresponding finger by selecting any one of the timing control signals of other fingers and an internal timing control signal in accordance with code tracker selection signals; and

a controller for receiving the timing control signals from the fingers, and outputting the code tracker selection signals corresponding to the respective fingers in accordance with differences among time delays being tracked by the fingers allocated with adjacent path signals. (emphasis added).

In the Office Action, it appears that the Examiner concedes that Tran fails to show each finger selecting any one of the timing control signals of other fingers and an internal timing control signal in accordance with code tracker selection signals and

a controller for receiving the timing control signals from the fingers. With respect to those features, Tran turns to Aue, arguing that Aue discloses those features. Applicants respectfully disagree with the Examiner's understanding of Tran and Aue.

First, while the Examiner correctly admits that Tran fails to show each finger selecting any one of the timing control signals of other fingers and an internal timing control signal in accordance with code tracker selection signals, as claimed, the Examiner erred in concluding that Tran teaches each finger receiving timing control signals generated from other fingers in order to track the allocated multi-path signals, as recited in claim 1. As discussed in great detail in our previous Response filed June 21, 2007, Tran unambiguously shows that each finger receives the finger assignment signal 100 (generated from an external finger assignment & control unit 20), and **within each finger**, the timing/control unit 52 receives the tracking adjustment signal 90 coming out of the finger's own code tracking loop 88. Specifically, if the tracking adjustment signal 90 is regarded as a timing control signal of its host finger, the tracking adjustment signal 90 is not shown as going into other fingers. On the other hand, the finger assignment signal 100, which is generated from an external finger assignment & control unit 20, is clearly not a timing control signal of other fingers. Consequently, contrary to the Examiner's conclusion, Tran does not disclose, teach, or suggest each finger receiving **timing control signals generated from other fingers** in order to track the allocated multi-path signals as claimed.

Furthermore, as discussed above, the Examiner relied on Aue as disclosing each finger selecting any one of the timing control signals of other fingers and an internal timing control signal in accordance with code tracker selection signals and a controller for receiving the timing control signals from the fingers. Specifically, the Examiner appears to rely on Fig. 7 of Aue as disclosing each finger selecting any one of the timing control signals of other fingers and an internal timing control signal in accordance with code tracker selection signals, and rely on a Fine Time Synchronization Unit as disclosing a controller for receiving the timing control signals

from the fingers. See page 3 of the Office Action. Applicants respectfully disagree with the Examiner on both accounts.

With respect to the feature of each finger selecting any one of the timing control signals of other fingers and an internal timing control signal in accordance with code tracker selection signals, nowhere does Aue (Fig. 7 included), disclose, teach, or suggest such feature. Fig. 7 of Aue merely shows that a Fine Time Synchronization Control (also referred to as “a control unit” for fine time synchronization in Aue), which is external to each RAKE finger, receives a time error signal generated from the Time-Error Estimator of each RAKE finger for producing a correlation difference signal (see col. 10, lines 40-48 and col. 10, lines 61-63), and outputs combined time error signals, each going into the PN Generator of a respective finger for controlling the time delay of the PN code of the receiving RAKE finger so as to ensure that intervals between RAKE fingers never falls below the minimal permissible interval (see col. 14, lines 19-24, col. 9, lines 25-28 and col. 10: 61 –col. 11: 2).

In essence, what goes into each RAKE finger is a combined time error signal generated from an external control unit for fine time synchronization. A time error signal, as disclosed in Aue, appears to be a signal conveying “a value for the difference between the optimal time offset and the current base time offset of the local PN generator of the RADE finger to the input signal.” See col. 10, lines 43 -347. However, a timing control signal, as expressly defined in the present application on page 11, is:

“a control signal for moving the time delay position of the corresponding path in performing the tracking operation of the allocated path in the respective finger. That is, the time delay position, which is the time point where the respective finger performs the demodulation, moves to the late-hypothesis side or the early-hypothesis side by the timing control signal.” (emphasis added).

Hence, the time error signal that goes into each RAKE finger, as disclosed in Aue is entirely different from the timing control signal of other fingers that goes into

each finger, as recited in claim 1. In addition, as clearly shown in Aue, the time error signal that each RAKE finger receives is not from other fingers, but instead is from an external control unit for fine time synchronization. Accordingly, Aue does not disclose, teach or suggest each finger selecting any one of the **timing control signals of other fingers** and an internal timing control signal in accordance with code tracker selection signals, as claimed.

Similarly, the Fine Time Synchronization Control, as disclosed in Aue, also cannot be regarded as disclosing a controller for receiving the timing control signals from the fingers, as claimed. As discussed above, the Fine Time Synchronization Control, which is an external control unit for fine time synchronization, merely receives a time error signal from each RAKE finger. However, as demonstrated above, a time error signal, as disclosed in Aue, is entirely different from a timing control signal as defined in the present application. Accordingly, contrary to the Examiner's understanding, the Fine Time Synchronization Unit does not disclose, teach or suggest a controller for receiving the timing control signals from the fingers, as claimed.

Accordingly, Aue does not disclose, teach, or suggest each finger selecting any one of the timing control signals of other fingers and an internal timing control signal in accordance with code tracker selection signals, as claimed. Nor does Aue disclose, teach, or suggest a controller for receiving the timing control signals from the fingers, as claimed. Consequently, Aue does not cure the correctly admitted deficiencies of Tran.

In summary, contrary to the Examiner's conclusion, Tran does not disclose, teach, or suggest each finger receiving timing control signals generated from other fingers in order to track the allocated multi-path signals, as claimed. Furthermore, Aue, as a reference, does not cure the admitted deficiencies of Tran, namely, each finger selecting any one of the timing control signals of other fingers and an internal

timing control signal in accordance with code tracker selection signals, as claimed, and a controller for receiving the timing control signals from the fingers, as claimed.

Accordingly, claim 1 should be allowable over Tran and Aue under 35 U.S.C. 103. The rejection of claim 1 should therefore be withdrawn.

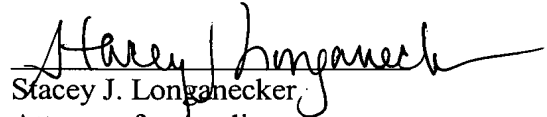
Claims 6, 11 and 16 all contains recitations similar to claim 1 with respect to selecting any one of the timing control signals of other fingers and an internal timing control signal in accordance with code tracker selection signals. As discussed above, neither Tran nor Aue discloses, teaches, or suggests this feature. Accordingly, claims 6, 11 and 16 are also believed to be allowable over Tran and Aue. The rejection of claims 6, 11 and 16 therefore should also be withdrawn.

### **III. Conclusion**

In view of the above, it is believed that this application is in condition for allowance and notice to this effect is respectfully requested. Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the telephone number indicated below.

Should any/additional fees be required, the Director is hereby authorized to charge the fees to Deposit Account No. 18-2220.

Respectfully Submitted,

  
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